AMENDMENTS TO THE CLAIMS

1. (cancelled)

2. (currently amended) ~~The method of claim 1~~ A method for image reversal in semiconductor processing, the method comprising:

forming a first implant mask layer upon a semiconductor substrate, wherein said first implant mask layer comprises a silicon antireflective coating layer;

forming a patterned photoresist layer over said first implant mask layer;

removing portions of said first implant mask layer not covered by said patterned photoresist layer so as to expose non-patterned portions of said substrate;

removing said photoresist layer;

forming a second implant mask layer over said non-patterned portions of said substrate, wherein said first implant mask layer has an etch selectivity with respect to said second implant mask layer; and

removing the remaining portions of said first implant mask layer to expose a reverse image of said substrate, comprising initially patterned portions of said substrate.

3. (original) The method of claim 2, wherein said silicon antireflective coating layer is formed upon an etch stop layer initially formed upon said substrate.

4. (original) The method of claim 3, wherein said etch stop layer further comprises a first organic antireflective coating layer, and said second implant mask layer further comprises a second organic antireflective coating layer.

5. (original) The method of claim 4, wherein said second organic antireflective coating layer is applied in a spin-on fashion and thermally cross-linked.

6. (original) The method of claim 5, further comprising removing a portion

of said second organic antireflective coating by chemical mechanical polishing so as to expose a top surface of silicon antireflective coating.

7. (original) The method of claim 2 wherein removal of said silicon antireflective coating is implemented with a fluorine plasma reactive ion etch.

8. (currently amended) A method for implementing image reversal for semiconductor device implantation, the method comprising:

forming a first implant mask layer upon a semiconductor substrate, wherein said first implant mask layer comprises a silicon antireflective coating layer;

forming a patterned photoresist layer over said first implant mask layer;

removing portions of said first implant mask layer not covered by said patterned photoresist layer so as to expose non-patterned portions of said substrate;

removing said photoresist layer;

subjecting said exposed non-patterned portions of said substrate to a first implantation;

forming a ~~first~~ second implant mask ~~implant mask~~ layer over said non-patterned portions of said substrate, wherein said first implant mask layer has an etch selectivity with respect to said second implant mask layer;

removing the remaining portions of said first implant mask layer to expose a reverse image of said substrate, comprising initially patterned portions of said substrate; and

subjecting said exposed initially patterned portions of said substrate to a second implantation.

9. (cancelled)

10. (currently amended) The method of claim ~~9~~8, wherein said silicon antireflective coating layer is formed upon an etch stop layer initially formed upon said

substrate.

11. (original) The method of claim 10, wherein said etch stop layer further comprises a first organic antireflective coating layer, and said second implant mask layer further comprises a second organic antireflective coating layer.

12. (original) The method of claim 11, wherein said second organic antireflective coating layer is applied in a spin-on fashion and thermally cross-linked.

13. (original) The method of claim 12, further comprising removing a portion of said second organic antireflective coating by chemical mechanical polishing so as to expose a top surface of silicon antireflective coating..

14. (currently amended) The method of claim ~~9~~ 8 wherein removal of said silicon antireflective coating is implemented with a fluorine plasma reactive ion etch.

15. (withdrawn) A semiconductor device, comprising:

a first implant region having a first conductivity type; and

a second implant region having a second conductivity type;

wherein said first and said second implant regions are self-aligned with respect to one another.

16. (withdrawn) The semiconductor device of claim 15, wherein said first implant region is formed following a lithographic patterning step and said second implant region is formed following a non-lithographic, image reversal step.